FPC 8059

5.7” VGA TFT
Fan less Touch Panel PC

User’s Manual

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Safety Approvals

- CE Marking
- FCC Class A

FCC Compliance

This equipment has been tested and complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. If not installed and used in accordance with proper instructions, this equipment might generate or radiate radio frequency energy and cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measurers:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with emission limits.

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Safety Precautions

Before getting started, read the following important cautions.

1. The FPC 8059 does not come equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
2. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
3. Disconnect the power cord from the FPC 8059 before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the FPC 8059 is properly grounded.
4. The brightness of the flat panel display decreases with usage. However, hours of use vary depending on the application environment.
5. Turn OFF the system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen. The FPC 8059 comes with a touch screen. Although the touch screen is chemical resistant, it is recommended that you spray the liquid cleaner on a cloth first before wiping the screen. In case your system comes without the touch screen, you must follow the same procedure and not spray any cleaner on the flat panel directly.
6. Avoid using sharp objects to operate the touch screen. Scratches on the touch screen may cause malfunction or internal failure to the touch screen.
7. The flat panel display is not susceptible to shock or vibration. When assembling the FPC 8059, make sure it is securely installed.

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5. Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

   - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
   - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

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Chapter 1
Introduction

This chapter contains the general information and the detail specifications of the FPC 8059. Chapter 1 includes the following sections:

- **General Description**
- **System Specification**
- **Dimensions**
- **I/O Outlets**
- **Package List**

1.1 General Description

The FPC 8059 is a 5.7" fan less TFT VGA touch panel computer. It is equipped with CISI-based low power consumption processor, AMD LX800.

By supporting the option of external battery set, the FPC 8059 can continue system operation if a main power shortage ever happens. In addition, the PC/104 and Mini-PCI slots are reserved for expansion availability.

The FPC 8059 supports Compact Flash card and is the best choice for applications of factory automation, machinery maker, building automation and semi-conductor.

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1.2 Specifications

1.2.1 Main CPU board

- **CPU:** AMD LX800 500MHz
- **System Chipset:** AMD LX + CS5536AD
- **BIOS:** Phoenix-Award 4Mbit with RPL/PXE Ethernet Boot ROM, Smartview and customer CMOS backup.
- **System Memory:** One 184-pin DDR DIMM
  Maximum up to 1GB

1.2.2 I/O System

- **Standard I/O:**
  - 2 x serial ports (1 x RS-232, 1 x RS-232/422/485)
  - 2 x USB Ports 2.0 compliant
- **Ethernet**:
  Equipped with 1 x RJ-45 for 10/100 base-T
- **Audio**:
  Realtek AC'97 codec audio (Line-out)
- **Expansion:**
  Equipped with 1 x Mini-PCI & 1 x PC/104
- **Compact Flash Socket:**
  One Compact Flash Type II Socket

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1.2.3 System Specification

- **5.7" VGA TFT LCD**
- **Disk drive housing:**
  - 1 x Compact Flash Type II Socket
- **DC 24V power supply**
- **Heat dispensing design**
- **Net weight:**
  - 2.0 Kgs
- **Dimension (main body size):**
  - 208.5 x 167.3 x 66.5 mm
- **Operating temperature:**
  - O° to 45°C ; Relative umidity:50%
- **Relative humidity:**
  - 10% to 85% @ 40° C, non-condensing
- **Altitude:**
  - 10,000 ft. (3,000 meters)
- **Vibration (operating):**
  - 5 to 500 Hz, 1 G random
- **Shock (operating):**
  - 10 G peak acceleration (11 msec. duration)

1.3 Dimensions

The following diagrams show the dimensions and outlines of FPC 8059.

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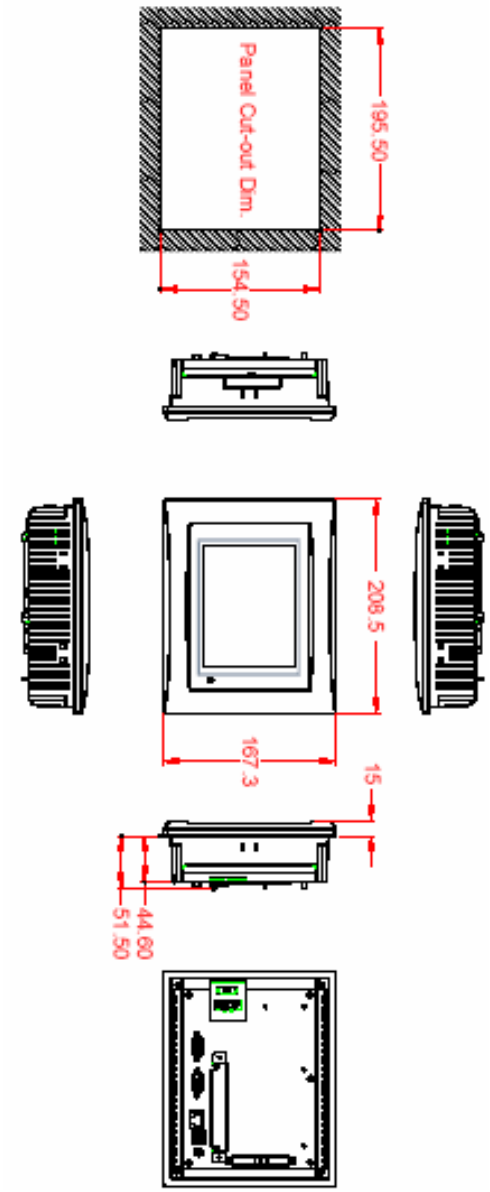

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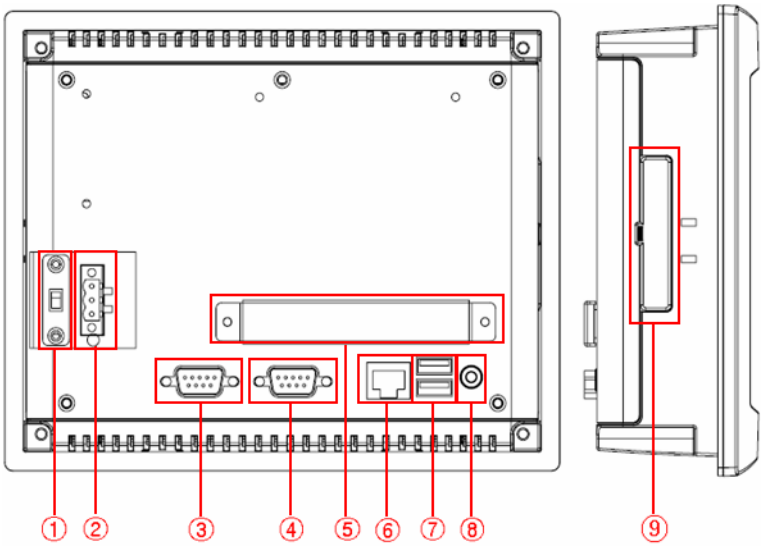
1.4 I/O Outlets

The following figure shows the I/O locations of the FPC 8059.



1:	Power Switch	**6:**	LAN
2:	DC power connector	**7:**	USB 2.0 x 2
3:	COM 2 (RS-232)	**8:**	Line-out
4:	COM 1 (RS-232/422/485)	**9:**	CompactFlash card
5:	PC/104 slot		

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1.5 Package list

When you receive the FPC 8059, there are following items in the package. If you can not find it, please contact Acnodes Corp. distributors.

1. FPC 8059 x 1
2. Panel mount kit x 6
3. Driver CD x1

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Chapter 2
Hardware Installation

The FPC 8059 provides rich I/O ports and flexible expansions for you to meet different demand such as PCMCIA, WLAN module and so on. The chapter will show you how to install the hardware. It includes :

- ④ Compact Flash Card
- ④ PC/104
- ④ Serial Port
- ④ Ethernet
- ④ Mounting Way

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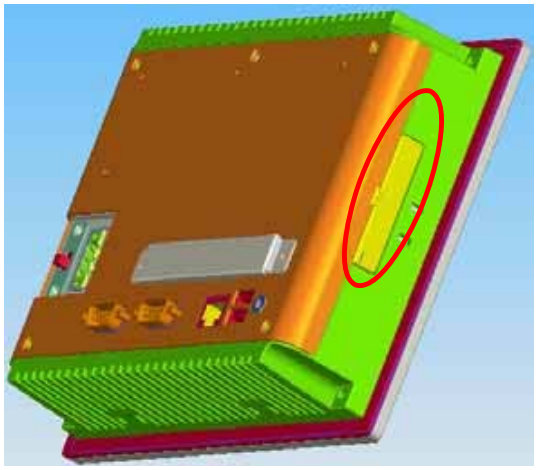
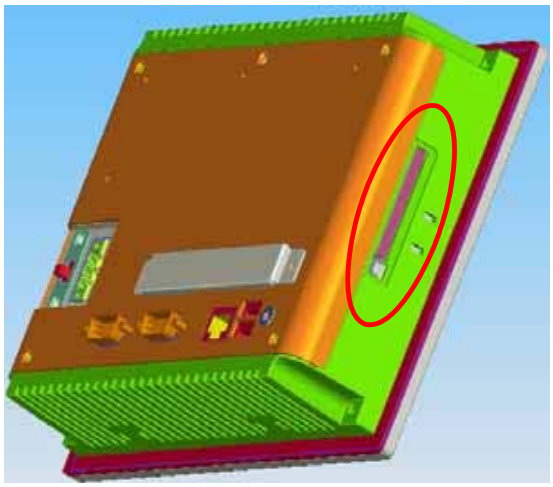
2.1 CompactFlash Card Installation

FPC 8059 offers one CF slot for users to install Compact Flash card. Please refer to the following instructions and illustration:

1. Remove the rubber cover at left-side.



2. Install Compact Flash card in the FPC 8059.



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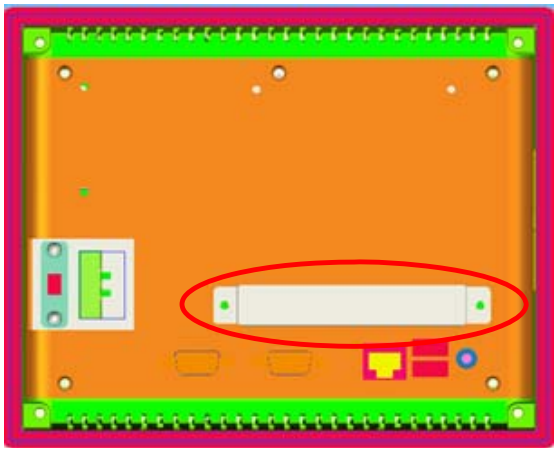
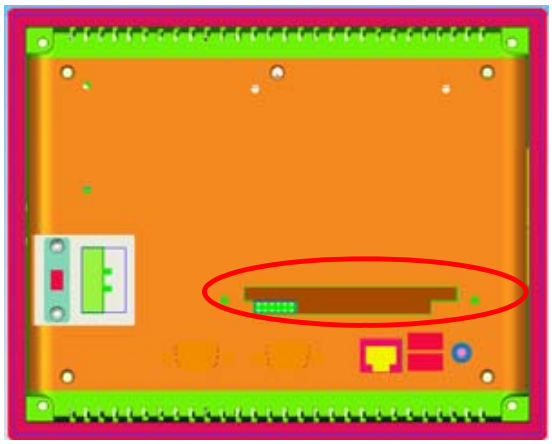
2.2 PC/104 Installation

The FPC 8059 offers a convenient expansion for users to install PC/104 module such as PCMCIA, WLAN, COM port card and so on. Please follow the steps:

1. Unscrew screws to remove the bracket.



2. Install PC/104 module.



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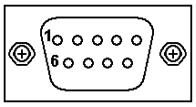
2.3 Serial Port Interface

The FPC 8059 has two onboard serial ports, COM1 (RS-232/422/485) & COM2 (RS-232).

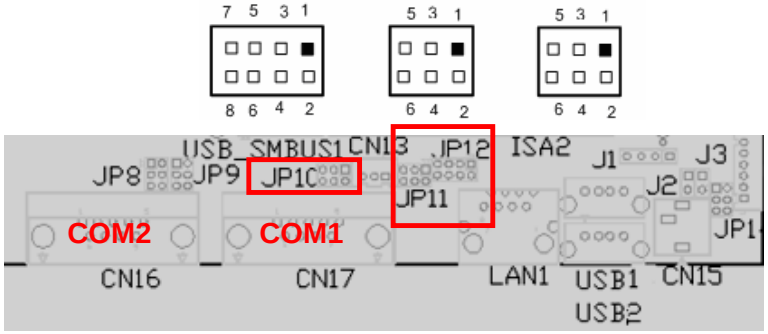
The pin assignments are listed below:

	Description
1	Data Carrier Detect (DCD)
2	Receive Data (RXD)
3	Transmit Data (TXD)
4	Data Terminal Ready (DTR)
5	Ground (GND)
6	Data Set Ready (DSR)
7	Request to Send (RTS)
8	Clear to Send (CTS)
9	Ring Indicator (RI)



In addition, COM1 can be set for RS-232/422/485 by jumper. The jump setting is listed as below:

COM1	JP12	JP10	JP11
RS-232 (default)	1-2	3-5, 4-6	3-5, 4-6
RS-422	3-4, 7-8	1-3, 2-4	1-3, 2-4
RS-485	5-6, 7-8	1-3, 2-4	1-3, 2-4



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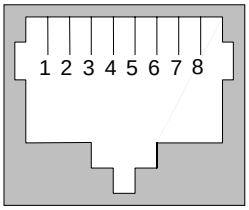
2.4 Ethernet

The FPC 8059 provides an NE2000 compatible Ethernet (RJ-45) interface. For network connection, just plug in one cable end of the FPC 8059 10/100 Base-T Hub into the standard RJ-45 connector. The pin assignment of the RJ-45 is listed below;

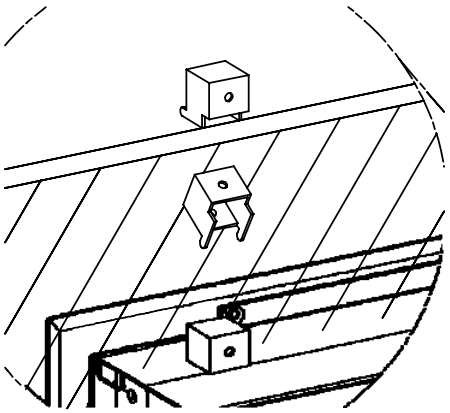
Pin	Signal
1	TX+ (Data transmission positive
2	TX- (Data transmission negative)
3	Rx+(Data reception positive)
4	RJ45 termination
5	RJ45 termination
6	Rx- (Data reception negative)
7	RJ45 termination
8	RJ45 termination



RJ-45

2.5 Mounting Way : Panel mount

The FPC 8059 is designed for panel mount application. To mount the FPC 8059, the standard set of mounting kit (included in the system packaging) is needed.



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Chapter 3
Windows CE.Net

3.1 Survey Form

Compact Flash Card	③ 32MB ~ 2GB
System Memory Support	③ 256MB ~ 1GB
Multiple I/O	③ Parallel Port ③ 3 x UARTs compliant Serial Ports
USB 2.0	③ 2 x USB 1.1
Keyboard & Mouse	③ PS/2 Keyboard & Mouse ③ USB Keyboard & Mouse
Display (MS Flat)	③ 320 x 240
Ethernet	③ Realtek 8139x/810x 10/100M
Audio	③ Line-out
Touch Screen	③ 5-wire Resistive type

3.2 Calibrate Touch Screen

This image includes a Touch Screen on COM3. To calibrate it, do the following steps:

1. Start\Programs\PenMount TouchPanel\Calibration
2. 3 types of calibration mode selection (4/9/16 points)

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